



SQL AND DATABASE

NEW WHEELS-BUSINESS REPORT

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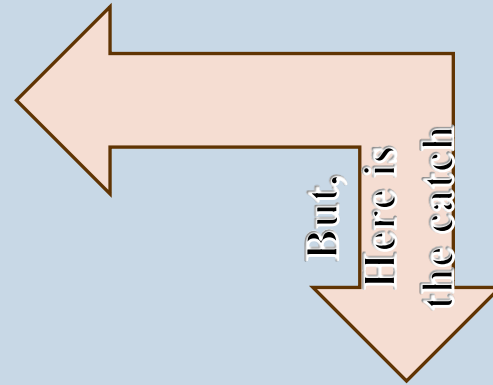
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New wheels

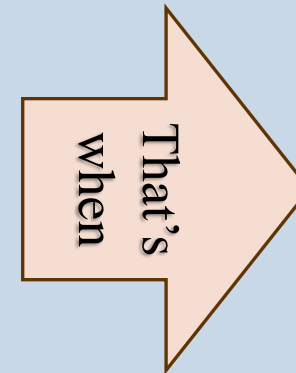
“Owning a Vehicle is not just about the journey, its about the freedom it brings”

Cars or automobiles are essential means of travels, but not everyone can afford to own a brand new one.

Pre-owned vehicles are often available at more affordable prices.



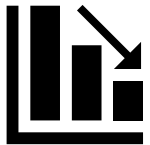
Would the services for Pre-owned vehicles be as good as those from the actual Manufactures?



New wheels, a vehicle resale company, launched an app to provide end-end services to customers, from listing the vehicle to shipping it to their homes.

New Wheels- Business Overview

Total Revenue
\$125.5 M



Decreased Revenue

Q1 Revenue \$ 39.6 M

Q4 Revenue -\$ 23.5 M

Total Customers
994



Customer Feedback

Very good- 21.3%

Good- 20.5%

Very bad- 18.6%

Total Orders
1000

Q1

310

Q4

199

Average Rating
3.0



Q1

Q4

Average Time to Ship
105 days



Q1

57

Q4

174

Concerns looming-Business Impacts

Critical Customer Feedback



Drop of customers by Quarter



Sales Decline



Revenue Dip

Addressing
Declining Sales

Quarterly Report & Key Business Metrics

Customer Metrics

Distribution Ratings

Customer Feedback

Vehicle Preference

Purchase, Revenue &
Order by Quarter

QoQ% change

Revenue Metrics

Shipping Metrics

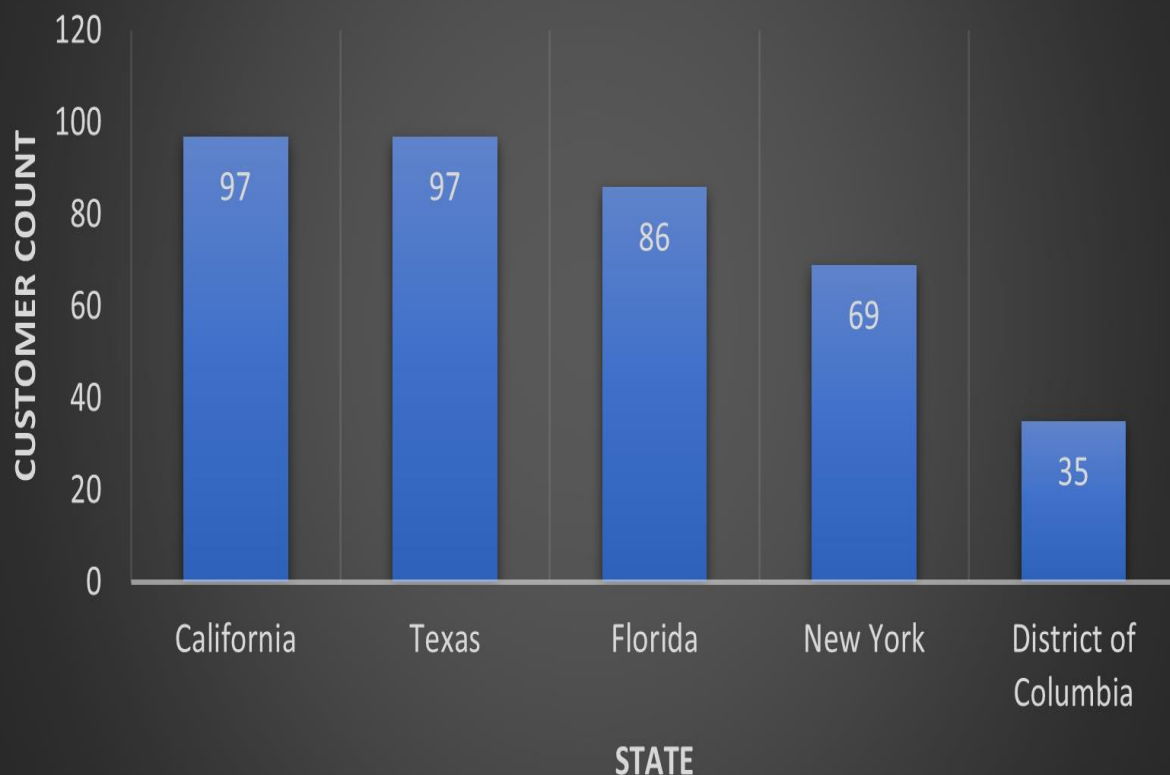
Discount Offered-Credit
Card

Average Time to ship

Distribution Metrics

Distribution of Customers across States

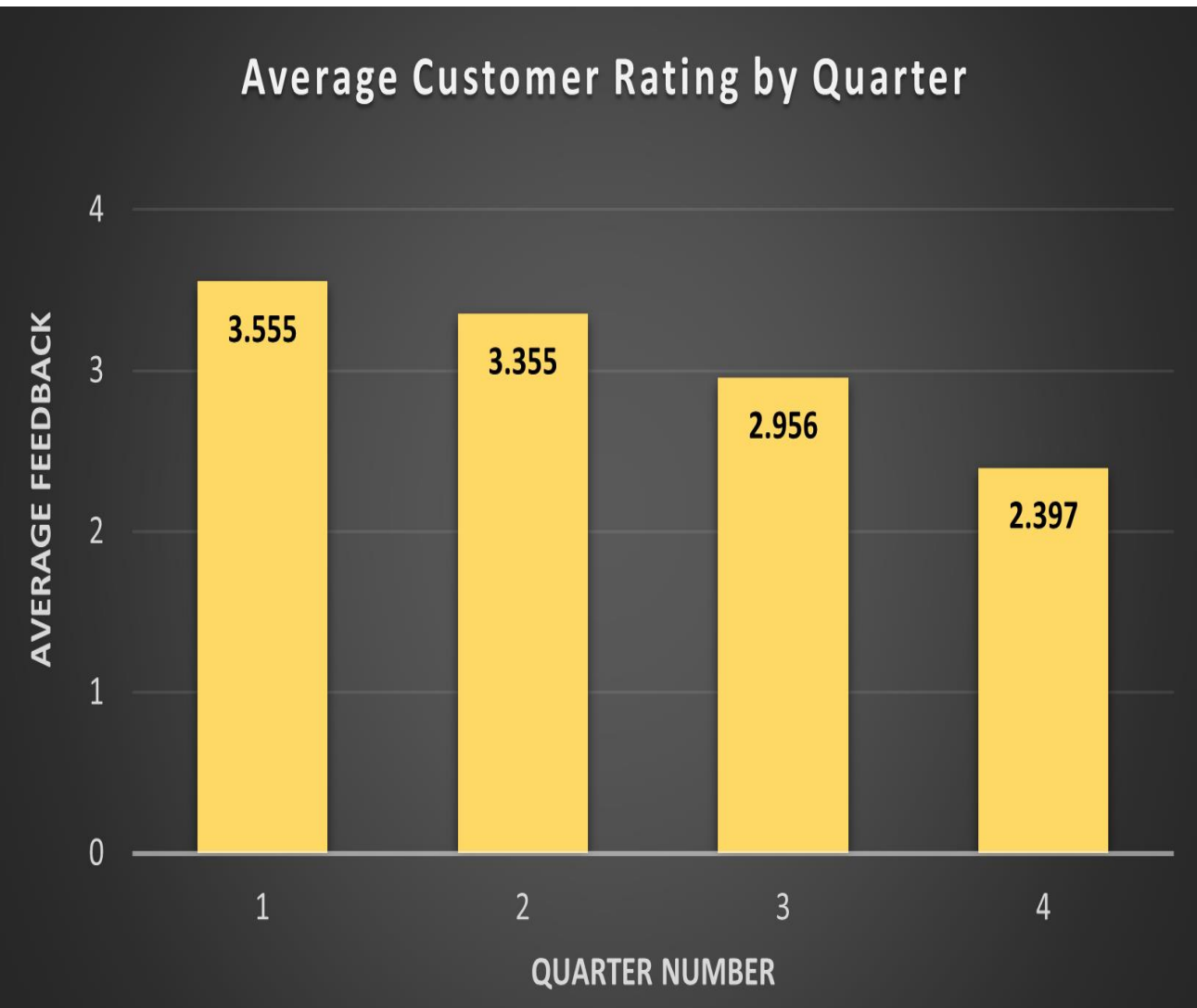
Distribution of Customers across Top 5 States
in USA



- Customers using the end-end services from the new wheels app, are spread wide across different states in the US.
- With the total customers of 994, California and Texas holds the highest customers of 97. Further, Florida with 86, New York 69 customers and District of Columbia 35 customers.
- States Maine, Wyoming and Vermont had the least customers of 1 each.

Fig 1: Distribution of Customers across top 5 States in US

Average Customer Ratings by Quarter



- ❖ The average customer rating has steadily declined quarter by quarter.
- ❖ The overall average customer rating is 3.
- ❖ Approximately 57% decrease observed from the 1st Quarter, with average feedback as 3.6 to 4th quarter where it dropped to 2.4.

Fig 2: Average customer ratings quarter by quarter

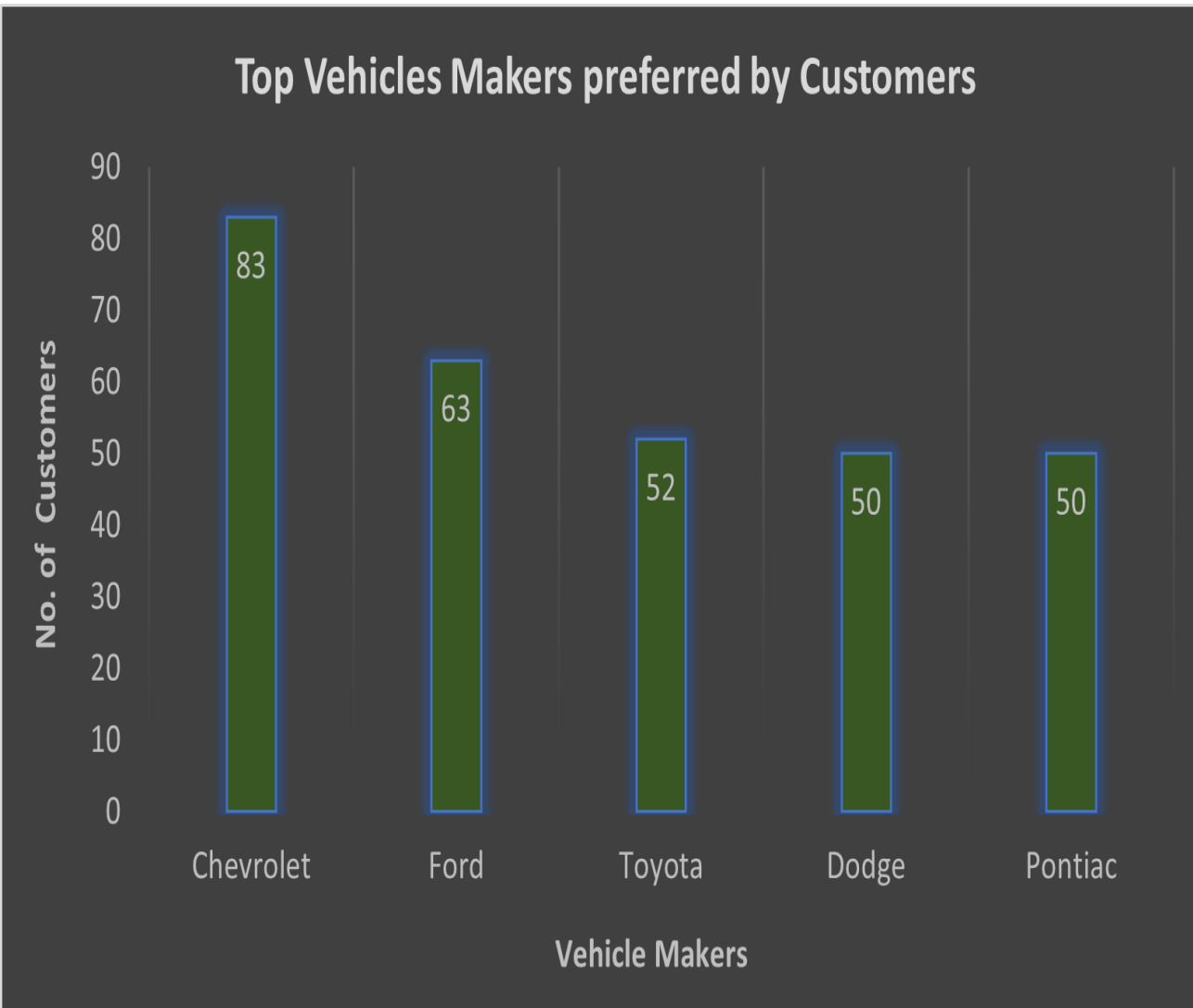
Trend of Customer Satisfaction



- From the trends seen in the graph, negative customer feedback percentage has drastically increased quarter by quarter.
- In the 1st Quarter approximately 78% of customers gave a feedback of very good to okay.
- The above trends change although not much visible in 2nd Quarter, it has drastically dropped to 40% in 3rd Quarter.
- The trend in negative feedback drastically increased from 22% in 1st Quarter to 60 % in 4th Quarter.
- Quarter 3 seems to be the point of inflection where the negative trend has significantly grown, indicating there could be a sales decline from 3rd Quarter and thereby revenue could have decreased.

Fig 3: Trends in customer feedback with quarter number

Top Vehicle makers preferred by customers



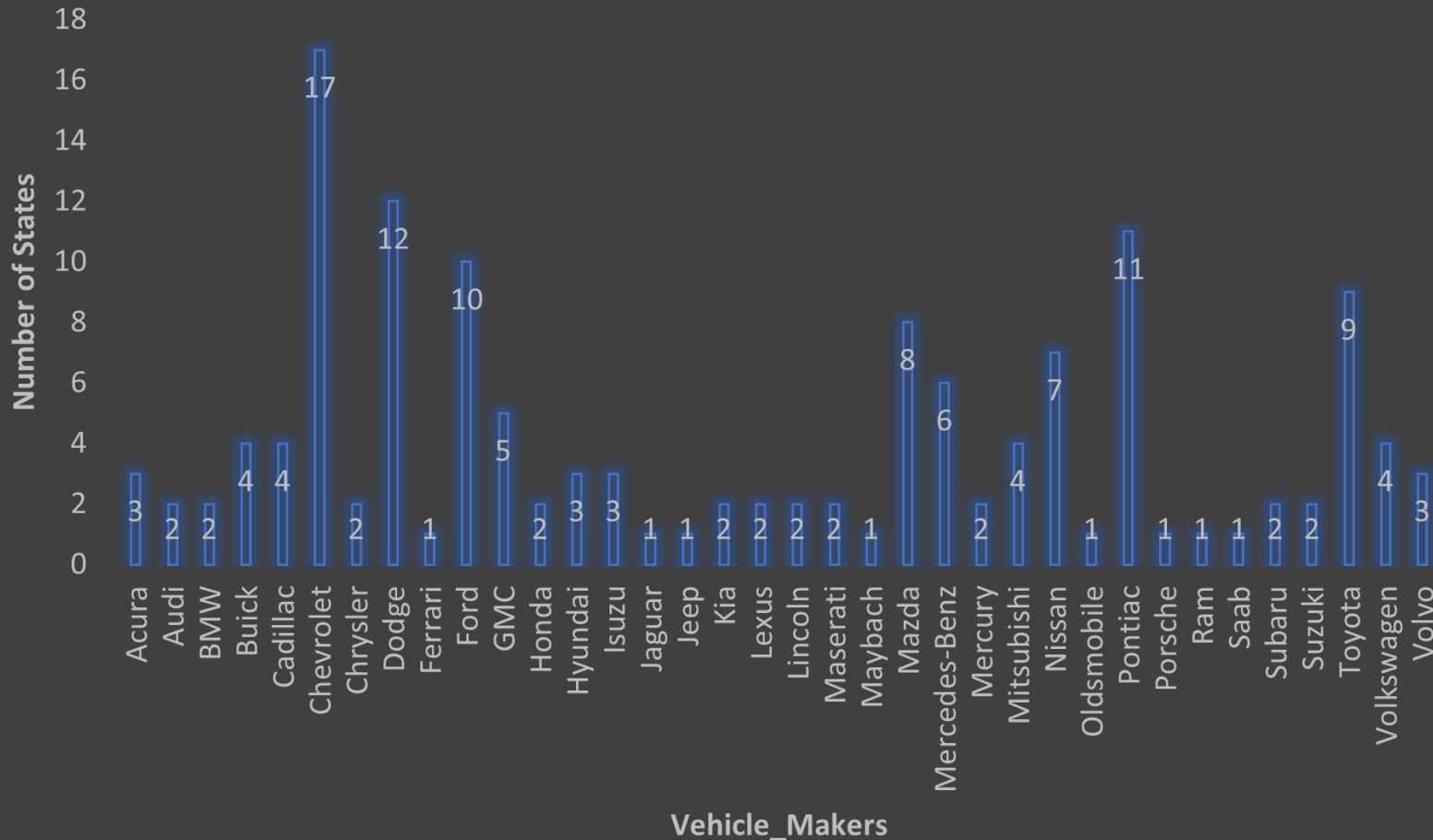
➤ Based on the customer count, the top 5 Vehicle makers preferred by the customers are Chevrolet at 83 customers, Ford at 63, Toyota at 52, Dodge and Pontiac sharing equal customer count at 50.

➤ This indicates that these brand choices have emerged as top preferences by customers getting vehicles at New wheels.

Fig 4: Top vehicle makers preferred by customers across US

Most preferred vehicle maker in each state

Top selling Vehicle Makers across each State



➤ From the graph its quite visible that across different states with the vehicle makers, Chevrolet is preferred by 17 states, Toyota with 9, Dodge at 12, Ford at 10 and Pontiac at 11.

➤ This indicates that these vehicle makers have maintained a strong presence/popularity among customers across states.

Fig 5: Top preferred vehicle makers across each State in US

Table 1: Rank 1 vehicle maker in each state

state	vehicle_maker	state	vehicle_maker	state	vehicle_maker	state	vehicle_maker	state	vehicle_maker
Alabama	Dodge	Colorado	Chevrolet	Idaho	Dodge	Kansas	Buick	Kentucky	Audi
Alaska	Chevrolet	Connecticut	Chevrolet	Illinois	Chevrolet		Dodge		Mercedes-Benz
Arizona	Cadillac		Maserati		GMC		Ford		Mercury
	Pontiac		Mercury		Ford		GMC		Nissan
Arkansas	Chevrolet		Volvo	Indiana	Mazda		Honda		Pontiac
	GMC	Delaware	Mitsubishi	Iowa	Chevrolet		Lexus		Ram
	Mitsubishi	District of Columbia	Chevrolet		Chrysler		Maserati		Volvo
	Pontiac	Florida	Toyota		Dodge		Mazda	Louisiana	Nissan
	Suzuki	Georgia	Toyota		Ford		Mercedes-Benz		BMW
	Volkswagen	Hawaii	Cadillac		Hyundai		Nissan		Ford
California	Audi		Ford		Isuzu		Saab		Pontiac
	Chevrolet		GMC		Jeep		Suzuki		Kia
	Dodge		Nissan		Mazda		Volkswagen	Maine	Mercedes-Benz
	Ford		Pontiac		Pontiac	Kentucky	Acura	Maryland	Ford
	Nissan		Toyota		Porsche			Massachusetts	Dodge
					Subaru				

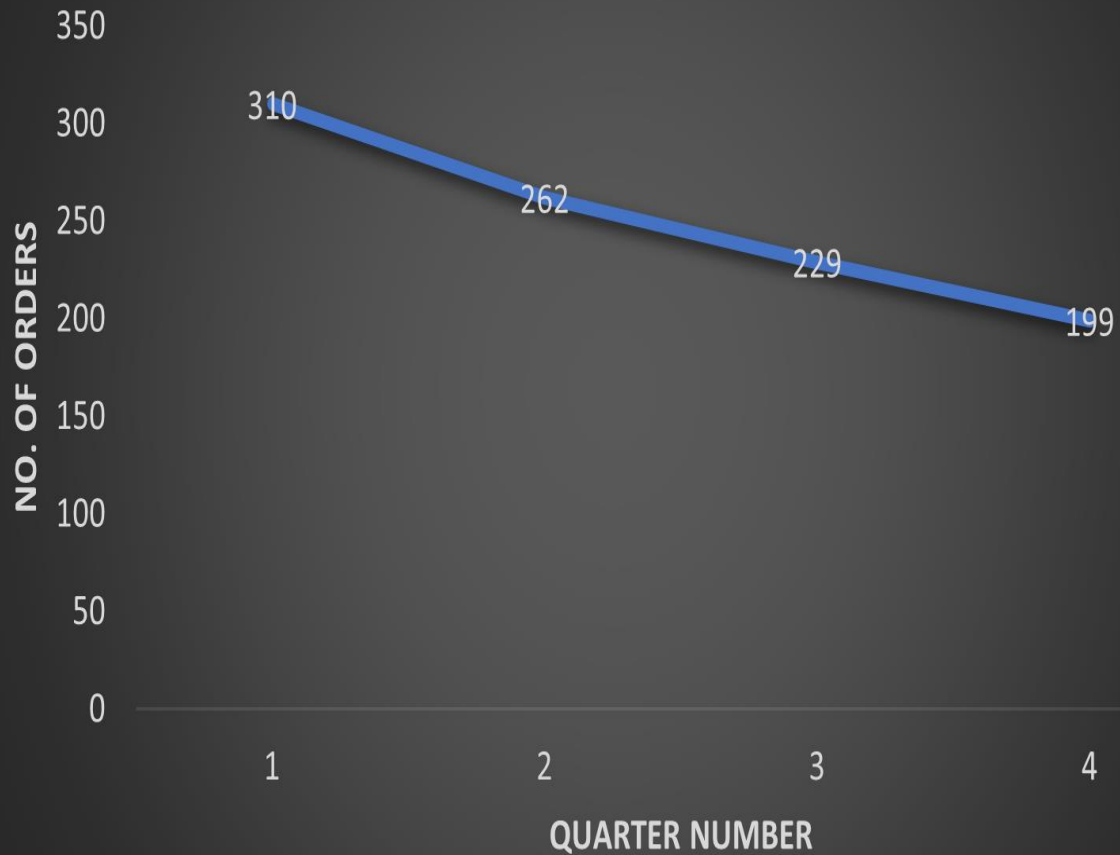
Table 1-contd.

state	vehicle_maker	state	vehicle_maker	state	vehicle_maker	state	vehicle_maker	state	vehicle_maker
Massachusetts	Chevrolet	Nebraska	Volkswagen	Oklahoma	Mazda	Utah	Buick	Wisconsin	Cadillac
Michigan	Ford	Nevada	Pontiac	Toyota			Chevrolet		Chevrolet
Minnesota	GMC	New Hampshire	Chrysler	Oregon	Toyota		Dodge		Dodge
Mississippi	Dodge		Lexus	Pennsylvania	Toyota		Isuzu		Honda
	Toyota		Lincoln	South Carolina	Acura		Lincoln		Mazda
Missouri	Chevrolet	New Jersey	Hyundai		BMW		Maybach		Nissan
Montana	Chevrolet		Mercedes-Benz		Buick		Oldsmobile		Pontiac
	Dodge	New Mexico	Dodge		Dodge		Pontiac	Wyoming	Buick
	Mitsubishi	New York	Toyota		Isuzu		Subaru		
Nebraska	Cadillac		Pontiac		Jaguar		Volkswagen		
	Chevrolet	North Carolina	Volvo		Kia	Vermont	Mazda		
	Mercedes-Benz	North Dakota	Ford		Mazda	Virginia	Ford		
	Nissan		Hyundai		Mitsubishi	Washington	Chevrolet		
	Pontiac	Ohio	Chevrolet	Tennessee	Mazda	West Virginia	Mercedes-Benz		
	Toyota	Oklahoma	Ferrari	Texas	Chevrolet	Wisconsin	Acura		

Revenue Metrics

Trend of purchases by Quarter

Trend of purchases by quarter

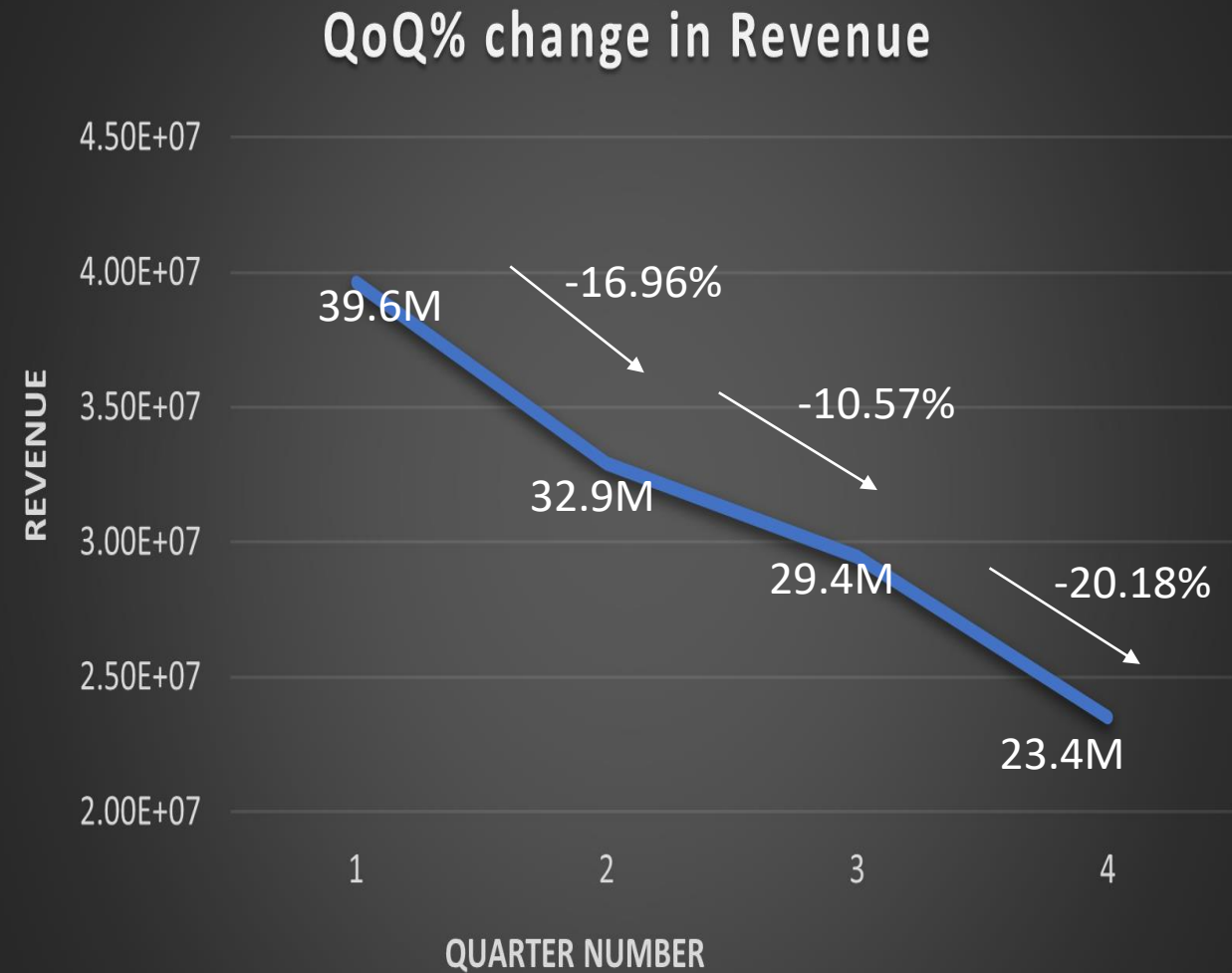


- Decline in the purchase of orders is seen quarter by quarter from 310 in Q1 to 199 in last quarter.
- A possible critical customer feedback could be the reason for the decreasing trend.

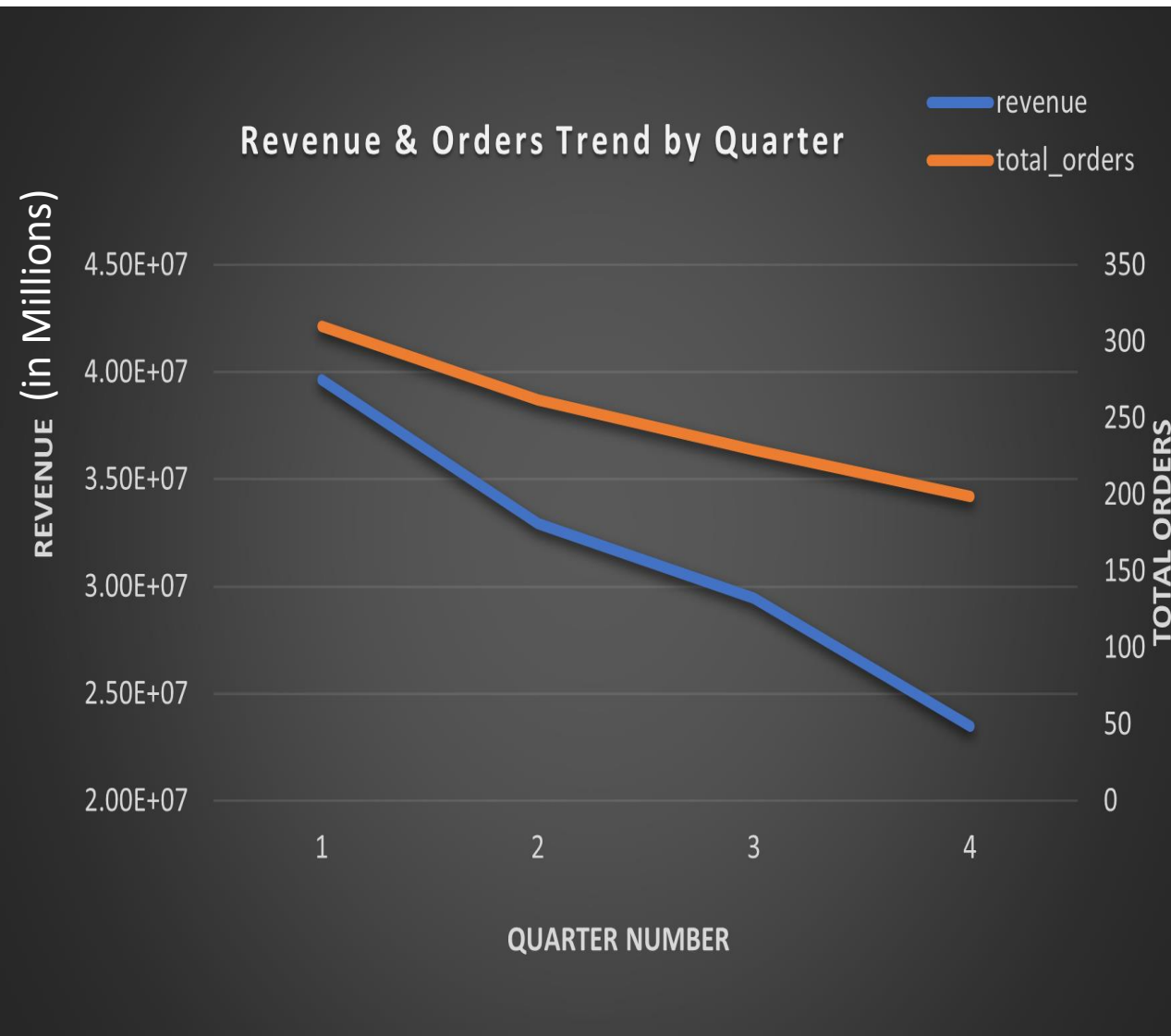
Fig 6: Trends in purchases of orders Quarter by Quarter

Quarter on Quarter % change in Revenue

- The total revenue for the overall year is \$125M
- Q1 has recorded a revenue of approximately \$33M and further which a decline in revenue is seen, and by the last quarter it dropped to 23.4M.
- The negative QoQ% change in each quarter clearly indicates the dip in revenue.



Trend of Revenue and Orders by Quarter



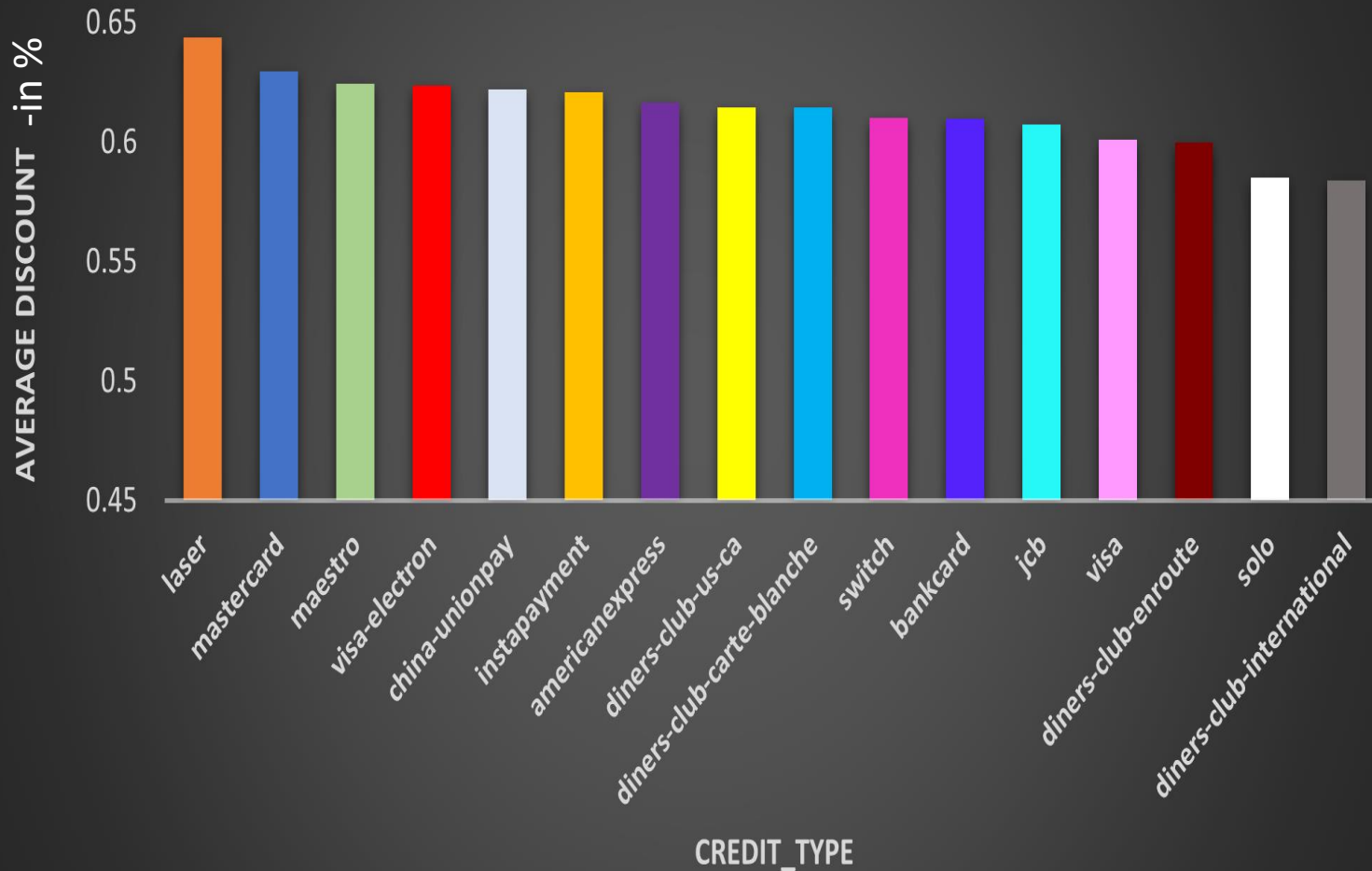
A steady decrease in revenue is seen for every decreasing total purchase of orders quarter by quarter.

Fig 8: Trends in Orders and Revenue by Quarter

Shipping Metrics

Average discount offered by Credit Card type

AVERAGE DISCOUNT OFFERED BY CREDIT TYPE



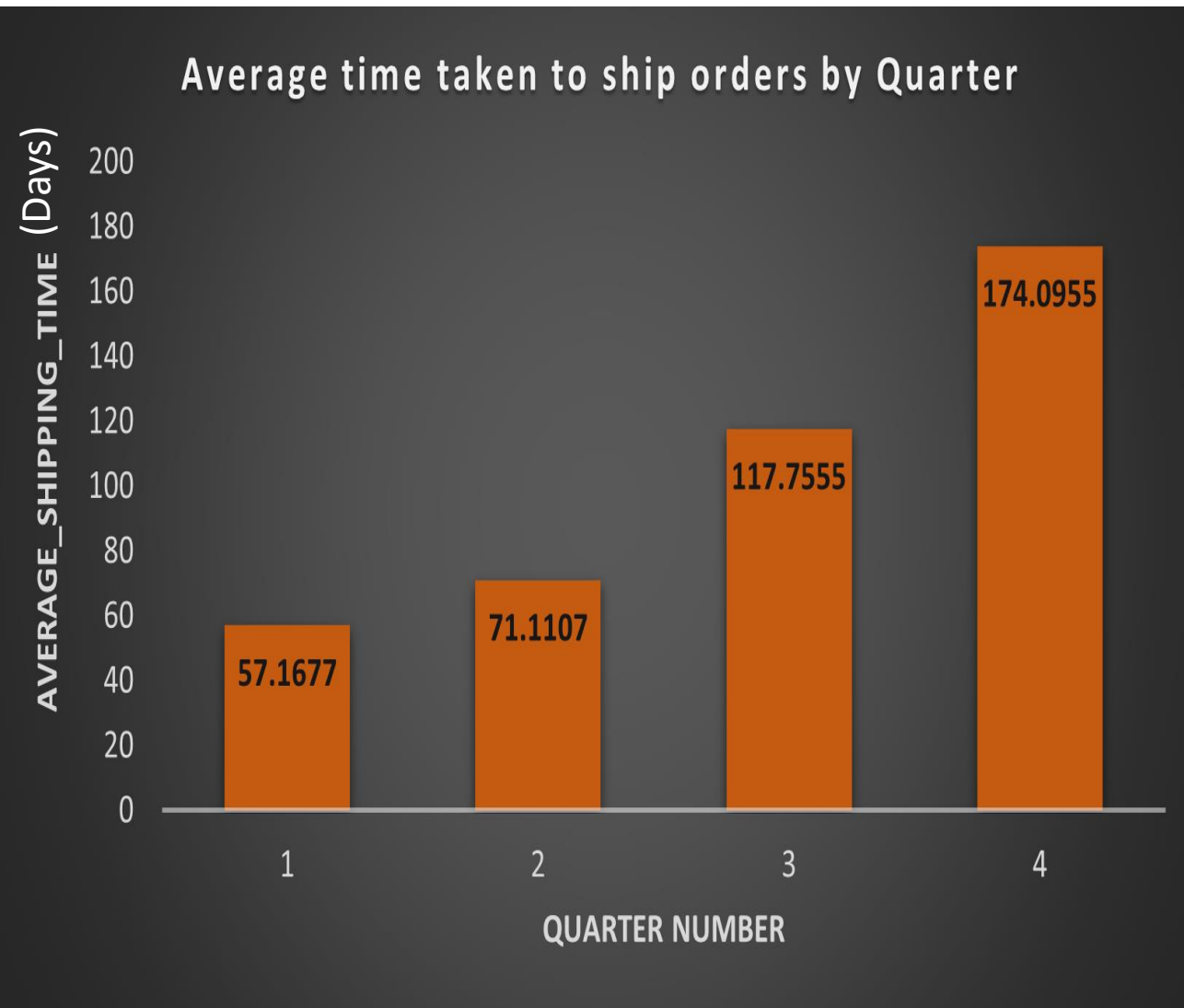
➤ The Average discounts offered by per credit card type varies approximately 0.65% to 0.59%.

➤ For example. A single customer using Laser credit card type with the vehicle price of approximately \$95092 on an average get a discount of only \$557 with average discount percent of 0.65 which is way too less on purchases.

Cust_id	Vehicle_maker	Vehicle_price	Avg_dis_amt	Avg_dis count
63304-581	Mazda	95092	557	0.65%

Fig 9: Average discount offered for different Credit Card Type in percentage

Time taken to ship orders by Quarter



- The shipping trend analysis of orders quarter by quarter is seen to increase with Q1 being 57 days approximately to a drastic increase of shipping in Q4 to 174 days.
- A drastic jump in shipping of orders is seen in 3rd Quarter. This drastic trend coincidentally is seen in customer feedback trend where at Q3 the feedback percentage turned negative.

Fig 10: Average time taken to ship orders Quarter by Quarter

INSIGHTS

- Increase in negative customer feedback is prominent in Q3 and Q4.
- Low discount rates on orders (e.g.: Actual Vehicle Price \$95091 and the discount percentage is 0.65% which leads to a payment of \$94473)
- Increased in shipping time from 57 days in Q1 to 174 days in Q4, which is 3 folds.
- Decreased purchase of orders due to critical negative feedback leading to sales decline and revenue dip.

RECOMMENDATIONS

- Addressing the concerns based on customers satisfaction and taking ahead will be the key motive to go forward in business. This can be achieved by setting up a separate process team to look at sales process or after sales services.
- The above strategy can definitely decrease the negative feedback count and bring in more customers.
- Shipping of orders within stipulated time as per customers expectation has to be definitely addressed. Timely communication between the processing and the delivery team can definitely decrease the long shipping time.